

becomes efficient.

\*\*\*\*\* Claims \*\*\*\*\*

1. Apparatus for 3D shape measurement comprising:
  - (A) a laser projecting device (1-1), said device consists of a line-laser projector(1-1a) and LEDs(1-1b) attached to the line-laser projector as markers;
  - (B) a image capturing device(1-2); and
  - (C) a computer(1-3).
2. The apparatus for 3D shape measurement defined as claim 1 being further provided with a display device(2-4).
3. A method for 3D measurement, the method comprising the steps of:
  - (A) projecting a line-laser to object by using the apparatus defined as claim 1(1-1);
  - (B) capturing the projected line-laser light (1-5) and LEDs on the apparatus defined as claim 1 by image capturing device(1-2) at the same time; and
  - (C) calculating the 3D shape from captured image using triangulation method by computer(1-3).
4. A method and a system for displaying information comprising:
  - (A) means for processing the steps defined as claim 3 in real-time; and
  - (B) means for displaying 3D shape acquired by the previously defined steps on display device(2-5).
5. A method for improving 3D shape of triangulation method, the method comprising the steps of:
  - (A) selecting accurate 3D points from 3D shape acquired by the method defined as claim 3; and
  - (B) correcting 3D shapes by using the selected accurate 3D points.